

PLOTTED/REVISED: 13-APR-2020

DISTRICT #: Metro
PLOT NAME: LAYOUT 21912
PATH & FILENAME: Projects\DM_R05\008\00007\Traffic\Signal\21912\21912_sgl.dgn

LOOP DETECTORS		
NUMBER	SIZE (FT)	LOCATION
D1-1	6 X 6	165
D1-2	2 - 6 X 6	10 & 40
D2-1	6 X 6	475
D2-2	6 X 6	320
D4-1	6 X 6	250
D4-2	2 - 6 X 6	10 & 25
D4-3	6 X 6	25
D4-4	6 X 6	10
D5-1	6 X 6	165
D5-2	2 - 6 X 6	10 & 40
D6-1	6 X 6	475
D6-2	6 X 6	320
D8-1	2 - 6 X 6	10 & 25

-ALL LOOP DETECTORS ARE PVC
-LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

(A) EQUIPMENT PAD
SIGNAL SERVICE EQUIPMENT (120/240 VOLT)
(SIGNAL SERVICE CABINET)
METER TO HH 17:
2" RSC
3-1/C #2
BETWEEN METER AND LOAD CENTER
3-1/C #2
BETWEEN LOAD CENTER AND HH 1:
2" RSC
2-3/C #12 (LUM)

REMOVE & REPLACE (INSTALL) MASTER CONTROLLER CONTROLLER AND CABINET

BETWEEN LOAD CENTER AND SIGNAL CABINET
2" RSC
2-1/C #6
1-1/C #6 BR. GR.
BETWEEN CABINET AND HH 1:
4" RSC
3-12/C #12
3-3/C #12
2-3/C #20
4-2/C #14

* F & I: 1-1.5" NMC
1-FO PIGTAIL CABLE (6SM TERMINATED)

REMOVE & F&I 1-RADIO COAXIAL CABLE
1-COM CABLE (CAT 5E)

BETWEEN CABINET AND HH 2:
4" RSC
3-12/C #12
4-3/C #12
1-3/C #20
10-2/C #14

* F & I: 1-2" NMC
1-FO PIGTAIL (6SM)

3" RSC STUBOUT (FUTURE USE)
THREAD AND CAP BOTH ENDS.

* F&I CONTROLLER CABINET TO PULL VAULT
1-1.5" NMC
1-FO PIGTAIL (6SM FIELD TERMINATED)

2" RSC STUBOUT FOR PHONE LINE.
THREAD AND CAP BOTH ENDS.

(B) WOOD POLE INPLACE-INPLACE
2" RSC RISER AND WEATHERHEAD
WITH 3-1/C #2 TO HH 17:

* F & I: 1-1.5" NMC
1-FO CABLE (36SM)

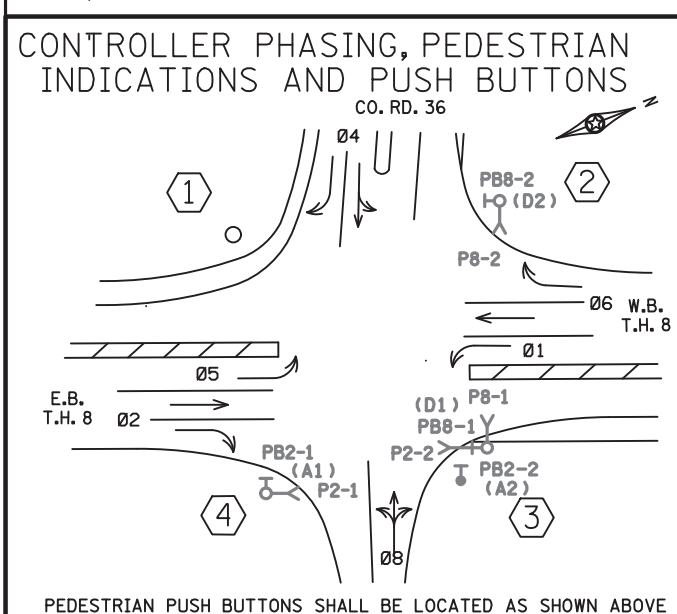
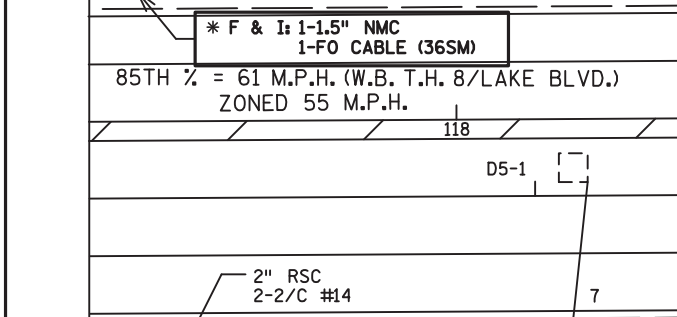
SHLD

85TH % = 61 M.P.H. (W.B. T.H. 8/LAKE BLVD.)
ZONED 55 M.P.H.

118 119 349 118

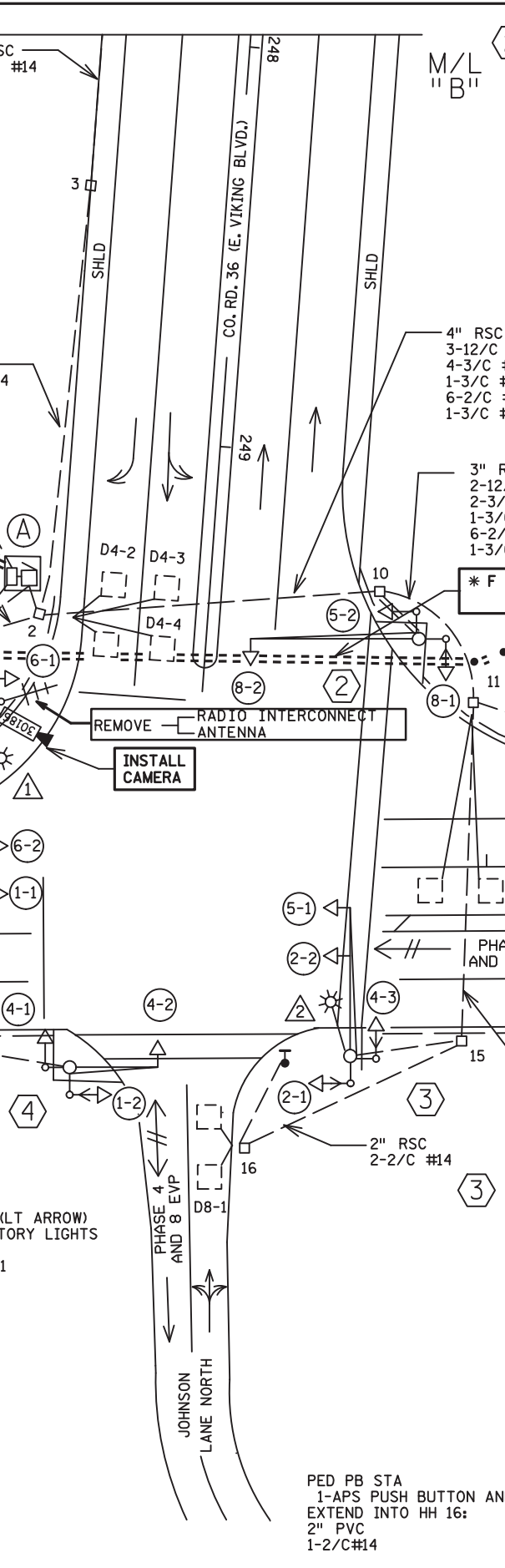
D5-1 349 D5-2 118

2" RSC 2-2/C #14



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASES.
- PHASES 2 AND 6 ARE ON VEHICLE RECALL.



(2) PA90 POLE FOUNDATION
TYPE PA90-A-40
ONE WAY SIGNAL OVERHEAD
(0' FROM END OF MAST ARM)
TYPE 10A - POLE MOUNTED AT 90
TYPE 10B - POLE MOUNTED AT 180
1-CD PED HEAD
1-APS PUSH BUTTON AND SIGN (PB8-2)(RT ARROW)
R9-3a SIGN ON POLE 2 FACING POLE 1
EXTEND INTO HH 10:
3" RSC
1-12/C #12
2-3/C #12

REMOVE & F&I D40-9 (DAVIT AT 350 DEG)
1-XG-350/CAM 400 EXTENSION (MOUNTED AT 350 DEG)
(INCLUDING LIGHTNING ROD)
7/16 GROUND BRAID
INSTALL 1-VIDEO CAMERA WITH MOUNT (30186)

2 - ONE WAY SIGNALS OVERHEAD
(0' AND 11' FROM END OF MAST ARM)
TYPE 10A - POLE MOUNTED AT 90
TYPE 10A - POLE MOUNTED AT 180

S&I LUMINAIRE - 200 WATT HPS

ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT
(INSTALLED 2' FROM END OF MAST ARM)
2 R9-3a SIGNS ON POLE 1 FACING
POLE 2 AND POLE 4

REMOVE RADIO INTERCONNECT ANTENNA

EXTEND INTO HH 1:
3" RSC
2-12/C #12
2-3/C #12
1-3/C #20
1-3/C #14
1-3/C #12 (LUM)

* F & I: 1-1.5" NMC BORE
1-FO CABLE (36SM)

REMOVE 1-RADIO COAXIAL CABLE
1-7/16" GROUND BRAID TO GROUND ROD
1-COM CABLE (CAT 5E)

* F & I: 1-1.5" NMC
1-FO CABLE (36SM)

2" RSC 2-2/C #14

(1) PA100 POLE FOUNDATION
TYPE PA100-A-45-D40-9 (DAVIT AT 350)

REMOVE & F&I D40-9 (DAVIT AT 350 DEG)
1-XG-350/CAM 400 EXTENSION (MOUNTED AT 350 DEG)
(INCLUDING LIGHTNING ROD)
7/16 GROUND BRAID
INSTALL 1-VIDEO CAMERA WITH MOUNT (30186)

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(0' AND 11' FROM END OF MAST ARM)
TYPE 10A - POLE MOUNTED AT 90
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S&I LUMINAIRE - 200 WATT HPS

ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT
(INSTALLED 2' FROM END OF MAST ARM)
2 R9-3a SIGNS ON POLE 1 FACING
POLE 2 AND POLE 4

REMOVE RADIO INTERCONNECT ANTENNA

EXTEND INTO HH 1:
3" RSC
2-12/C #12
2-3/C #12
1-3/C #20
1-3/C #14
1-3/C #12 (LUM)

* F & I: 1-1.5" NMC BORE
1-FO CABLE (36SM)

REMOVE 1-RADIO COAXIAL CABLE
1-7/16" GROUND BRAID TO GROUND ROD
1-COM CABLE (CAT 5E)

* F & I: 1-1.5" NMC
1-FO CABLE (36SM)

2" RSC 2-2/C #14

(3) PA90 POLE FOUNDATION
TYPE PA90-A-35-D40-9 (DAVIT AT 350)
2 - ONE WAY SIGNALS OVERHEAD
(0' AND 11' FROM END OF MAST ARM)
TYPE 10B - POLE MOUNTED AT 90
TYPE 10B - POLE MOUNTED AT 180
2-CD PED HEADS
1-APS PUSHBUTTON AND SIGN (PB8-1)(LT ARROW)
LUMINAIRE - 200 WATT HPS
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT
(INSTALLED 2' FROM END OF MAST ARM)
EXTEND INTO HH 15:
3" RSC
2-12/C #12
2-3/C #12
1-3/C #20
1-3/C #12 (LUM)

REMOVE & F&I 1-RADIO COAXIAL CABLE
1-7/16" GROUND BRAID TO GROUND ROD
1-COM CABLE (CAT 5E)

* F & I: 1-1.5" NMC
1-FO CABLE (36SM)

2" RSC 2-2/C #14

(4) PA85 POLE FOUNDATION
TYPE PA85-A-20
ONE WAY SIGNAL OVERHEAD
(0' FROM END OF MAST ARM)
TYPE 10A - POLE MOUNTED AT 180
TYPE 10B - POLE MOUNTED AT 90
1-CD PED HEAD
1-APS PUSH BUTTON AND SIGN (PB2-1)(LT ARROW)
TWO WAY EVP DETECTOR & CONFIRMATORY LIGHTS
(2' FROM END OF MAST ARM)
R9-3a SIGN ON POLE 4 FACING POLE 1
EXTEND INTO HH 6:
3" RSC
1-12/C #12
3-3/C #12
1-3/C #20

REMOVE & F&I 1-RADIO COAXIAL CABLE
1-7/16" GROUND BRAID TO GROUND ROD
1-COM CABLE (CAT 5E)

* F & I: 1-1.5" NMC
1-FO CABLE (36SM)

2" RSC 2-2/C #14

(3) PA90 POLE FOUNDATION
TYPE PA90-A-35-D40-9 (DAVIT AT 350)
2 - ONE WAY SIGNALS OVERHEAD
(0' AND 11' FROM END OF MAST ARM)
TYPE 10B - POLE MOUNTED AT 90
TYPE 10B - POLE MOUNTED AT 180
2-CD PED HEADS
1-APS PUSHBUTTON AND SIGN (PB8-1)(LT ARROW)
LUMINAIRE - 200 WATT HPS
ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT
(INSTALLED 2' FROM END OF MAST ARM)
EXTEND INTO HH 15:
3" RSC
2-12/C #12
2-3/C #12
1-3/C #20
1-3/C #12 (LUM)

REMOVE & F&I 1-RADIO COAXIAL CABLE
1-7/16" GROUND BRAID TO GROUND ROD
1-COM CABLE (CAT 5E)

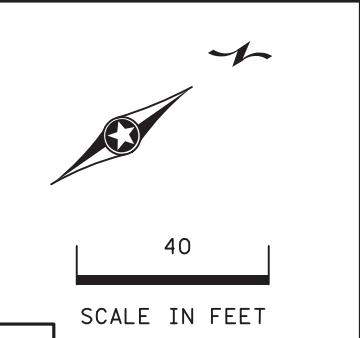
* F & I: 1-1.5" NMC
1-FO CABLE (36SM)

2" RSC 2-2/C #14

SIGNAL HEAD CHART

FACE	R	Y	G
1-1, 1-2	←	←	←
2-1, 2-2, 2-3	○	○	○
4-1, 4-2, 4-3	○	○	○
5-1, 5-2	←	←	←
6-1, 6-2, 6-3	○	○	○
8-1, 8-2, 8-3	○	○	○

-ALL SIGNAL INDICATIONS ARE 12"
-ALL RED SIGNAL INDICATIONS ARE LED
-ALL SIGNAL HEADS HAVE BACKGROUND SHIELDS



- REVISE SIGNAL SYSTEM NOTES:**
1. ALL ITEMS ARE INPLACE UNLESS NOTED.
 2. INSTALL VIDEO CAMERA ON POLE NO. 1. (SUPPLIED BY MNDOT)
 3. FURNISH AND INSTALL A CAMERA EXTENSION. CABLE SHALL BE ROUTED THROUGH THE SIGNAL SYSTEM TO THE SIGNAL CONTROL CABINET.
 4. THE CAMERA EXTENSION SHALL BE GROUNDED IN HH 1 WITH A 5/8" X 15' GROUND ROD. (SEE DETAIL)
 5. THE EXISTING SIGNAL CABINET CONCRETE FOUNDATION HAS A SPARE 3" CONDUIT. FIBER OPTIC CONDUIT (1.5 NMC) TO ENTER THE SIGNAL CABINET THROUGH THIS SPARE CONDUIT.
 6. REPLACE (INSTALL) THE SIGNAL CONTROL CABINET AND THE CONTROLLER. (SUPPLIED BY MNDOT)
 7. * DENOTES WORK TO BE COMPLETED AS PART OF THE FIBER OPTIC PLAN.

BY	DATE	REVISIONS

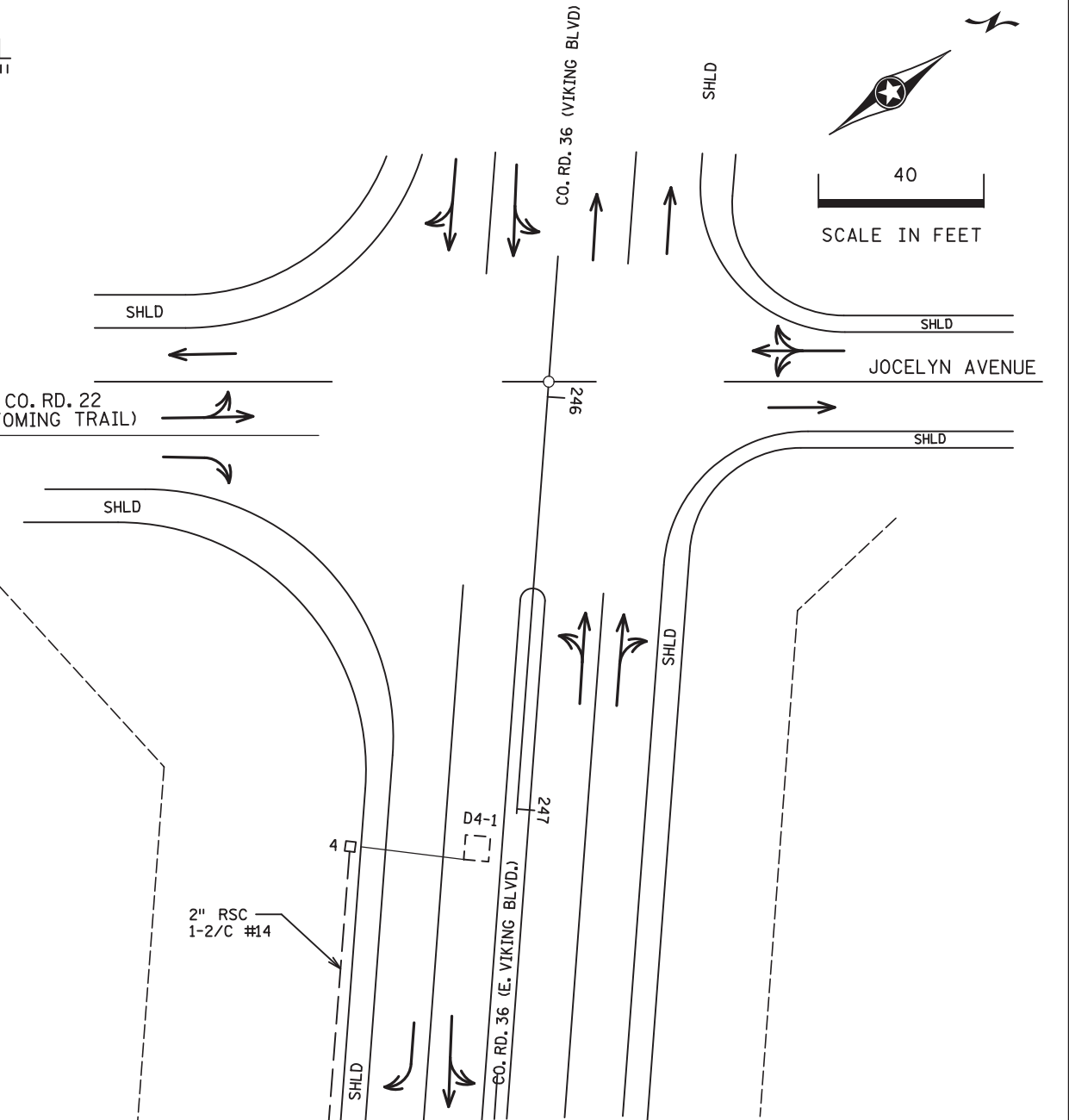
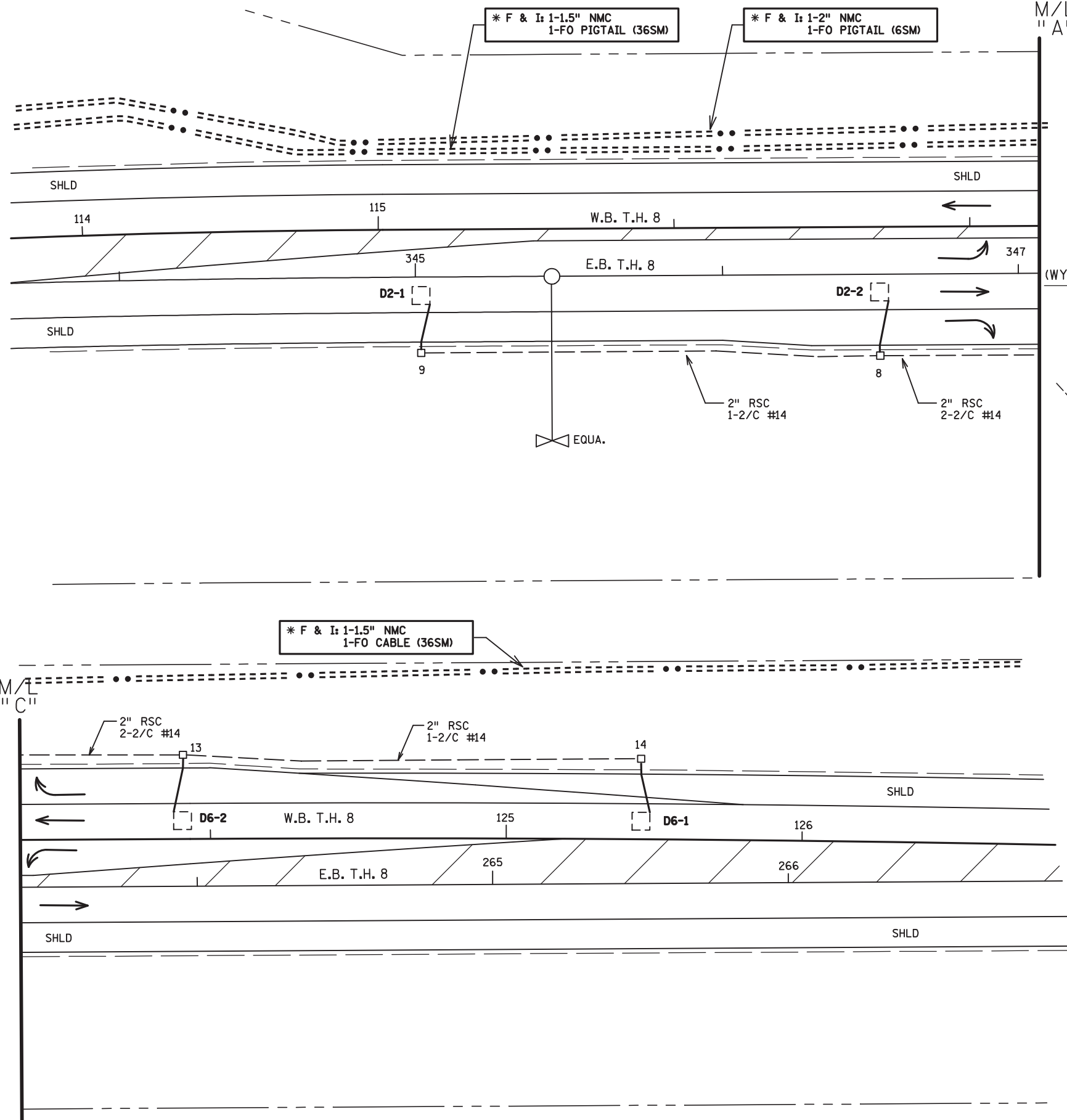
SYSTEM ID: 1735960 T.E. 22530
METER ADDRESS: 28210 TRUCK HWY 8
OLD SYSTEM ID: 21912

INTERSECTION LAYOUT
REVISE SIGNAL SYSTEM D
TH 8 AT CO.RD.36 (E.VIKING BLVD.)
/JOHNSON LANE NORTH
IN THE CITY OF CHISAGO, CHISAGO COUNTY

S.A.P. NO. _____ DRAWN BY: BAM CKD BY: GAK DATE: 4-9-20
CERTIFIED BY *Gregory Kim* LIC. NO. 26829 DATE: 4/9/20
STATE PROJ. NO. 1301-126 (T.H.8) SHEET NO. SS16 OF SS42 SHEETS

PLOTTED/REVISED: 23-APR-2020

DISTRICT #: Metro
PLOT NAME: SS17_matchlines 21912
PATH & FILENAME: Projects\DM_RoS\008\0000\Traffic\Signals\21912\21912_sgl.dgn



- REVISE SIGNAL SYSTEM NOTES:**
1. ALL ITEMS ARE INPLACE UNLESS NOTED.
 2. INSTALL VIDEO CAMERA ON POLE NO. 1. (SUPPLIED BY MNDOT)
 3. FURNISH AND INSTALL A CAMERA EXTENSION. CABLE SHALL BE ROUTED THROUGH THE SIGNAL SYSTEM TO THE SIGNAL CONTROL CABINET.
 4. THE CAMERA EXTENSION SHALL BE GROUNDED IN HH 1 WITH A 5/8" X 15' GROUND ROD. (SEE DETAIL)
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 7. * DENOTES WORK TO BE COMPLETED AS PART OF THE FIBER OPTIC PLAN.

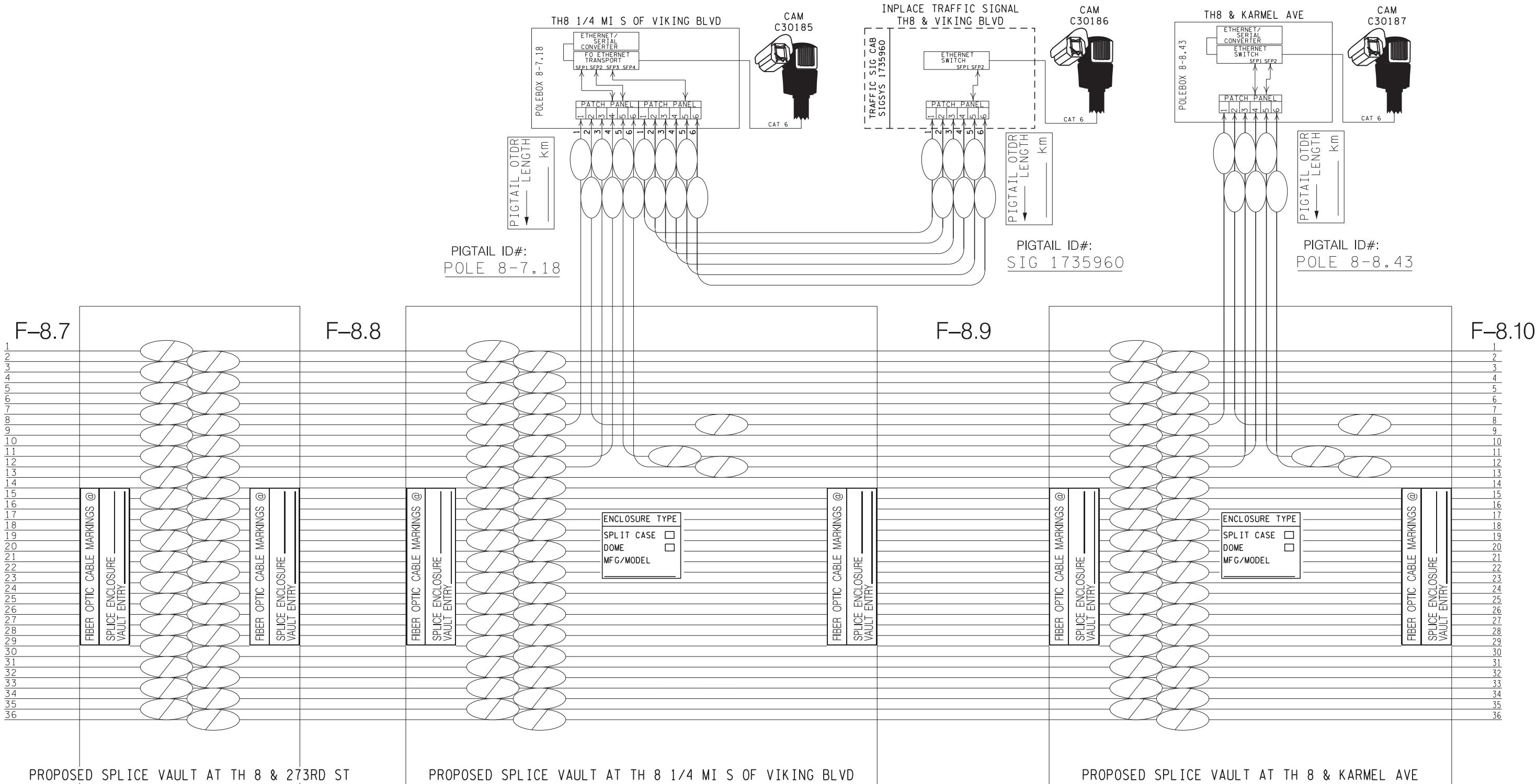
BY	DATE	REVISIONS

SYSTEM ID: 1735960 T.E. 22530
 METER ADDRESS: 28210 TRUCK HWY 8
 OLD SYSTEM ID: 21912

MATCHLINES
 REVISE SIGNAL SYSTEM D
 TH 8 AT CO.RD.36 (E.VIKING BLVD.)
 /JOHNSON LANE NORTH
 IN THE CITY OF CHISAGO, CHISAGO COUNTY

S.A.P. NO.
 CERTIFIED BY *Gregory Ken*
 LICENSED PROFESSIONAL ENGINEER

DRAWN BY: BAM CKD BY: GAK DATE: 4-9-20
 LIC. NO. 26829 DATE: 4/9/20
 STATE PROJ. NO. 1301-126 (T.H.8) SHEET NO. SS17 OF SS42 SHEETS

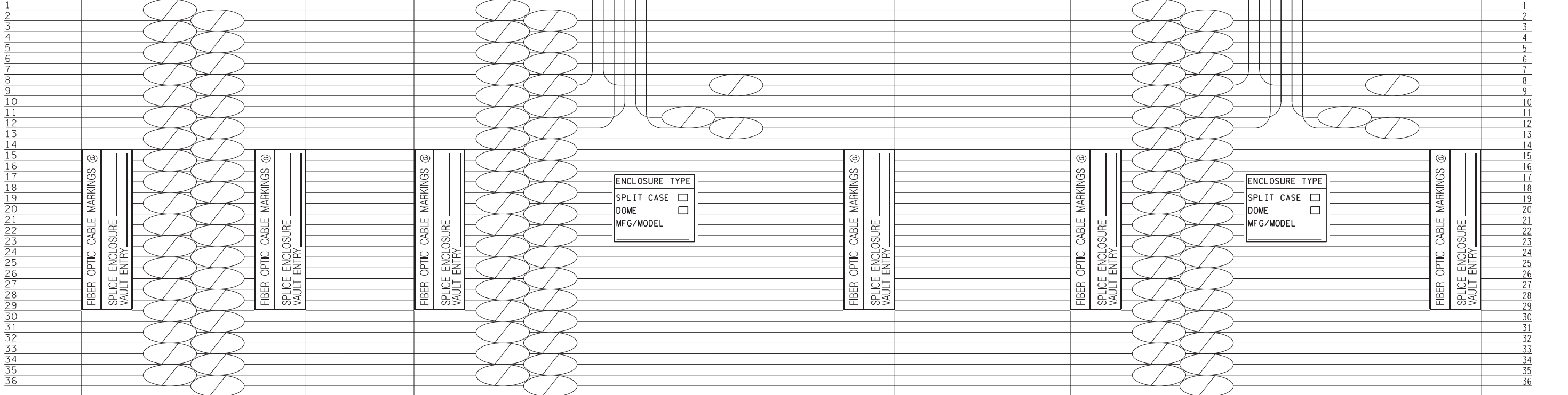


F-8.7

F-8.8

F-8.9

F-8.10



PROPOSED SPLICE VAULT AT TH 8 & 273RD ST

PROPOSED SPLICE VAULT AT TH 8 1/4 MI S OF VIKING BLVD

PROPOSED SPLICE VAULT AT TH 8 & KARMEL AVE

ENCLOSURE TYPE
 SPLIT CASE
 DOME
 MFG/MODEL

ENCLOSURE TYPE
 SPLIT CASE
 DOME
 MFG/MODEL

ENCLOSURE TYPE
 SPLIT CASE
 DOME
 MFG/MODEL

PLOTTED/REVISED: 2/6/2014

LOOP DETECTORS		
NUMBER	SIZE (FT)	LOCATION
D1-1	6 X 6	165
D1-2	2 - 6 X 6	10 & 40
D2-1	6 X 6	475
D2-2	6 X 6	320
D4-1	6 X 6	250
D4-2	2 - 6 X 6	10 & 25
D4-3	6 X 6	25
D4-4	6 X 6	10
D5-1	6 X 6	165
D5-2	2 - 6 X 6	10 & 40
D6-1	6 X 6	475
D6-2	6 X 6	320
D8-1	2 - 6 X 6	10 & 25

-ALL LOOP DETECTORS ARE PVC
 -LOCATION: DISTANCE FROM CROSSWALK/STOP BAR IN FEET

(A) EQUIPMENT PAD
 SIGNAL SERVICE EQUIPMENT (120/240 VOLT)
 (SIGNAL SERVICE CABINET)
 METER TO HH 17:
 2" RSC
 3-1/C #2
 BETWEEN METER AND LOAD CENTER
 3-1/C #2
 BETWEEN LOAD CENTER AND HH 1:
 2" RSC
 2-3/C #12 (LUM)
 MASTER CONTROLLER
 CONTROLLER AND CABINET
 BETWEEN LOAD CENTER AND SIGNAL CABINET
 2" RSC
 2-1/C #6
 1-1/C #6 BR. GR.
 BETWEEN CABINET AND HH 1:
 4" RSC
 3-12/C #12
 3-3/C #12
 2-3/C #20
 4-2/C #14
 1-RADIO COAXIAL CABLE
 BETWEEN CABINET AND HH 2:
 4" RSC
 3-12/C #12
 4-3/C #12
 1-3/C #20
 10-2/C #14

3" RSC STUBOUT (FUTURE USE)
 THREAD AND CAP BOTH ENDS.
 2" RSC STUBOUT FOR PHONE LINE.
 THREAD AND CAP BOTH ENDS.

(B) WOOD POLE INPLACE-INPLACE
 2" RSC RISER AND WEATHERHEAD
 WITH 3-1/C #2 TO HH 17:

(1) PA100 POLE FOUNDATION
 TYPE PA100-A-45-D40-9 (DAVIT AT 350)
 2 - ONE WAY SIGNALS OVERHEAD
 (0' AND 11' FROM END OF MAST ARM)
 TYPE 10A - POLE MOUNTED AT 90'
 TYPE 10A - POLE MOUNTED AT 180'
 LUMINAIRE - 200 WATT HPS
 ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT
 (INSTALLED 2' FROM END OF MAST ARM)
 2 R9-3a SIGNS ON POLE 1 FACING
 POLE 2 AND POLE 4
 RADIO INTERCONNECT ANTENNA
 EXTEND INTO HH 1:
 3" RSC
 2-12/C #12
 1-3/C #20
 1-3/C #12 (LUM)
 1-RADIO COAXIAL CABLE

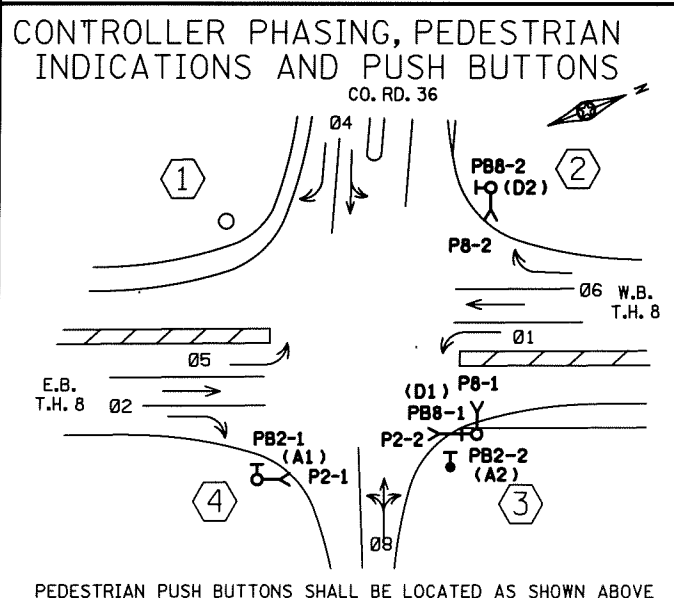
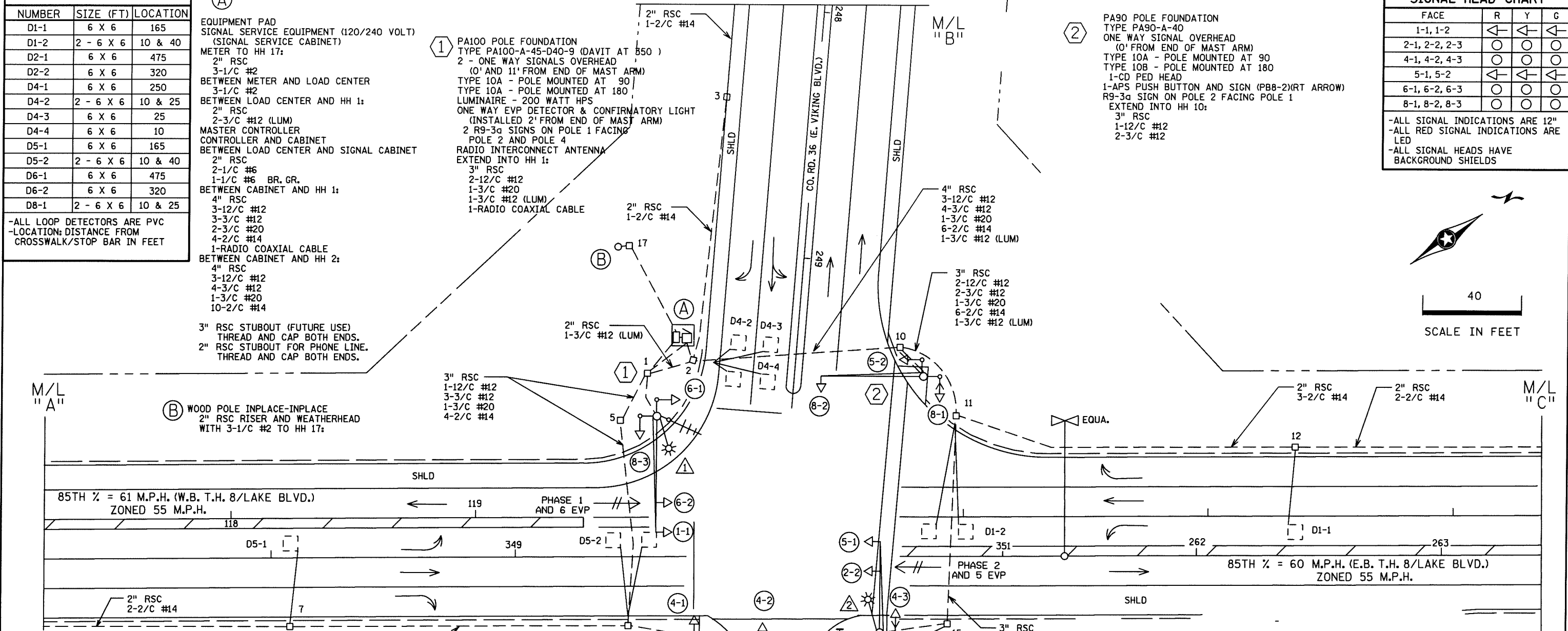
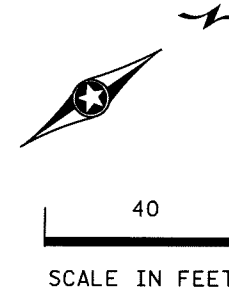
(2) PA90 POLE FOUNDATION
 TYPE PA90-A-40
 ONE WAY SIGNAL OVERHEAD
 (0' FROM END OF MAST ARM)
 TYPE 10A - POLE MOUNTED AT 90'
 TYPE 10B - POLE MOUNTED AT 180'
 1-CD PED HEAD
 1-APS PUSH BUTTON AND SIGN (PB8-2)(RT ARROW)
 R9-3a SIGN ON POLE 2 FACING POLE 1
 EXTEND INTO HH 10:
 3" RSC
 1-12/C #12
 2-3/C #12

(4) PA85 POLE FOUNDATION
 TYPE PA85-A-20
 ONE WAY SIGNAL OVERHEAD
 (0' FROM END OF MAST ARM)
 TYPE 10A - POLE MOUNTED AT 180'
 TYPE 10B - POLE MOUNTED AT 90'
 1-CD PED HEAD
 1-APS PUSH BUTTON AND SIGN (PB2-1)(LFT ARROW)
 TWO WAY EVP DETECTOR & CONFIRMATORY LIGHTS
 (2' FROM END OF MAST ARM)
 R9-3a SIGN ON POLE 4 FACING POLE 1
 EXTEND INTO HH 6:
 3" RSC
 1-12/C #12
 3-3/C #12
 1-3/C #20

(3) PA90 POLE FOUNDATION
 TYPE PA90-A-35-D40-9 (DAVIT AT 350)
 2 - ONE WAY SIGNALS OVERHEAD
 (0' AND 11' FROM END OF MAST ARM)
 TYPE 10B - POLE MOUNTED AT 90'
 TYPE 10B - POLE MOUNTED AT 180'
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 1-APS PUSHBUTTON AND SIGN (PB8-1)(LFT ARROW)
 LUMINAIRE - 200 WATT HPS
 ONE WAY EVP DETECTOR & CONFIRMATORY LIGHT
 (INSTALLED 2' FROM END OF MAST ARM)
 EXTEND INTO HH 15:
 3" RSC
 2-12/C #12
 2-3/C #12
 1-3/C #20
 1-3/C #12 (LUM)

SIGNAL HEAD CHART			
FACE	R	Y	G
1-1, 1-2	←	←	←
2-1, 2-2, 2-3	○	○	○
4-1, 4-2, 4-3	○	○	○
5-1, 5-2	←	←	←
6-1, 6-2, 6-3	○	○	○
8-1, 8-2, 8-3	○	○	○

-ALL SIGNAL INDICATIONS ARE 12"
 -ALL RED SIGNAL INDICATIONS ARE LED
 -ALL SIGNAL HEADS HAVE BACKGROUND SHIELDS



SIGNAL SYSTEM OPERATION

- THE SIGNAL SYSTEM FLASH MODE IS ALL RED.
- NORMAL OPERATION IS 6 PHASE, WITH PHASES 1 AND 5 BEING PROTECTED LEFT TURN PHASES.
- PHASES 2 AND 6 ARE ON VEHICLE RECALL.

BY	DATE	REVISIONS
EJA	02-01-13	AS-BUILT OF SP 8825-420 SOLID STATE PBS ADDED
SJK	02-05-14	AS-BUILT PLAN SP 8825-445

SYSTEM ID: 21912 T.E. 5817
 METER ADDRESS: 28210 TRUCK HWY 8
 MASTER ID: 38820 T.E.

INTERSECTION LAYOUT
 TH 8 AT CO. RD. 36 (E. VIKING BLVD.)
 / JOHNSON LANE NORTH
 IN THE CITY OF CHISAGO, CHISAGO COUNTY

S.A.P. NO. _____ DRAWN BY: MAS CKD BY: GAK DATE: 4-12-13
 CERTIFIED BY _____ LIC. NO. 26829 DATE: _____
 STATE PROJ. NO. _____ SHEET NO. 1 OF 2 SHEETS

DISTRICT #: METRO
 PLOT NAME: T21912.spl
 PATH & FILENAME: IP_PWP:\0779895\T21912.spl.dgn

